

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A method, comprising:  
simultaneously reading original values from a first plurality of registers;  
parsing a dependency-producing instruction;  
~~determining results of the execution of the dependency-producing instruction;~~  
~~determining a select number of registers among the plurality of registers, wherein~~  
~~the select number of registers are to be modified by a second instruction, wherein~~  
~~execution of the second instruction is conditional upon the results of the execution of the~~  
~~dependency-producing instruction~~ identifying a set of one or more registers to be  
modified among the first plurality of registers;  
  
modifying ~~a subset of the~~ values in the ~~select number~~ identified set of registers  
according to the dependency-producing instruction ~~with architecturally correct values~~  
~~comprised of the results of the dependency-producing instruction; and~~  
  
simultaneously writing a set of zero or more of the original values that have not  
been modified and the ~~architecturally correct~~ modified values to ~~the~~ a second plurality of  
registers distinct from the first plurality of registers.
2. (Original) The method of claim 1, further comprising:  
  
providing a means by which an entire set of values may be collectively read or  
collectively written by instructions that operate on the entire set of values.

3. (Previously Presented) The method of claim 2, wherein said simultaneously reading includes reading values from a plurality of predicate registers.
4. (Previously Presented) The method of claim 1, wherein said simultaneously reading includes reading values from a plurality of Not-a-Thing (NaT) registers.
5. (Cancelled).
6. (Currently amended) The method of claim 5, wherein the ~~Itanium~~ dependency-producing instruction selects one register to be modified.
7. (Currently amended) The method of claim 5, wherein the ~~Itanium~~ dependency-producing instruction selects two registers to be modified.
8. (Currently amended) The method of claim 5, wherein the ~~Itanium~~ dependency-producing instruction selects ~~[[48]]~~ forty-eight registers to be modified.
9. (Currently amended) The method of claim 5, wherein the ~~Itanium~~ dependency-producing instruction selects up to ~~[[63]]~~ sixty-three registers to be modified.
10. (Previously Presented) The method of claim 1, wherein said simultaneously writing includes writing the values to a plurality of predicate registers.

11. (Currently amended) The method of claim 10, wherein the plurality of predicate registers includes ~~all 63~~ sixty-three predicate registers.

12-22. (Cancelled)

23. (Currently amended) A computer readable medium containing executable instructions which, when executed in a processing system, causes the system to perform a read-modify-write operation, comprising:

simultaneously reading original values from a first plurality of registers;

~~determining results of a dependency producing instruction;~~

identifying a set of one or more registers to be modified among the first plurality of registers;

~~determining a select number of registers among the plurality of registers, wherein the select number of registers are to be modified by a second instruction, wherein execution of the second instruction is conditional upon the results of the execution of the dependency producing instruction;~~

~~modifying a subset of the values in the select number~~ identified set of registers according to the dependency-producing instruction ~~with architecturally correct values comprised of the results of the dependency producing instruction; and~~

simultaneously writing a set of zero or more of the original values that have not been modified and the ~~architecturally correct~~ modified values to the a second plurality of registers distinct from the first plurality of registers.

24. (Previously Presented) The medium of claim 23, wherein said simultaneously reading includes reading values from a plurality of predicate registers.

25. (Original) The medium of claim 23, further comprising:  
providing a means by which an entire set of values may be collectively read or collectively written by instructions that operate on the entire set of values.

26-29. (Cancelled)